ACCESSION NR: AP4040954

light at the instant of decomposition has no effect upon the rate of its thermal decomposition. A gamma current greater that 0.4×10^{-9} amps was not observed, the photocurrent is 0.3×10^{-8} amp at a background current of 1.7×10^{-8} amp. Barium azide was thermally decomposed at 125°C with a dosage rad min. Findings show that irradiation of the barium azide sample with X-rays at the instant of decomposition increases the maximum decomposition rate and reduces the induction period. The authors conclude that the hypothesis concerning the limiting role of electron transition from the valency zone into the conductivily band during the thermal decomposition of ion salts can be valid only with a specific ratio between the concencentiations of free electrons and effective electron traps. In particular, this hypothesis does not correspond to fact in the case of silver azide. Orig. art. has: 3 figures and 7 equations.

ASSOCIATION: Nauchno-issledovatel'skiy institut yadernov fiziki, elektroniki i avtomatiki pri Tomskom politekhnicheskom institute im. S. M. Kirova (Scientific-Research Institute for nuclear physics, electronics and automatic control of Tomsk Polytechnic Institute)

SUBMITTED: 30Nov63 ENCL: 00

Card 2/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110018-2"

ACCESSION NR: AP4040954

SUB CODE: IC, NP NO REF SOV: 006 OTHER: 011

Card 3/3

L 25242-65 EWT(m)/EPF(c)/EPF(n)-2/EWP(j) Po-4/Pr-4/Pu-4 OG/RM

ACCESSION NR: AP5001516 S/0020/64/159/005/1113/1116

AUTHOR: Boldyrev, V. V.; Oblivantsev, A. N.; Lykhin, V. M.

TITLE: Radiation stability of alkali metal azides to gamma rays

SOURCE: AN SSSR. Doklady, v. 159, no. 5, 1964, 1113-1116

TOPIC TAGS: alkali metal azide, alkali metal azide dissociation, radiation induced azide dissociation, thermal azide dissociation, azide ion crystal lattice

ABSTRACT: Data were sought for arranging the title products according to their radiostability, depending on the characteristics of the crystal lattice and the parameters of the lattice of the azide ion. These are tabulated and graphed. The azides of Na, K, Rb and Cs whose preparation is briefly described, were subjected to γ irradiation at a dose of 2.9×10^{16} ev/ml. sec. at 35-40 C, then tested for the presence of free metal and non-reacted acid ion in dependence of irradiation time. This stability was found to decrease in the order of Na, K, Rb and Cs, depending inversely on the cation radius; however the curves for the azide

Cord1/3

ion obtained and those for the free metal did not coincide, due apparently to the formation of the nitrite ion, following ionization of the air or increase of the oxidation rate of the azide under irradiation. Linear dependence of the initial radiation-induced dissociation output upon the free volume of the elemental crystal cell points towards the effect of the packing density of the crystals on azide radiolysis which proceeds by diffusion of the radiation product. Crystal density seemed the most important determinant of radiation-induced yield, in contrast to that for thermal dissociation of these salts; this starts from active locations at exterior and interior defects of the crystal surface and is basically determined by the release of an electron from the azide ion. Radiation and thermal dissociation thus do not coincide although their endproducts are the same. "Irradiation was conducted on the gamma-instrument of the Institute of Nuclear Physics of the AN UzbSSR by S. G. Pashinski to whom the authors wish to express their thanks."
Orig. art. has: 1 table and 2 figures
ASSOCIATION: Institut khimicheskoy kinetiki i goreniya Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Chemical Kinetics and Combustion, Siberian Division Academy of Sciences, SSSR); Nauchno-issledovatel'skiy institut yadernoy fiziki pri Tomskom politekhnicheskom institut im. S. M. Kirova (Scientific

L 25242-65

ACCESSION NR: AP5001518

Research Institute of Nuclear Physics, Tomsk Polytechnical Institute)

SUBMITTED: 15Jun64 ENCL: 00 SUB CODE: IC, GC

NR REF SOV: 007 OTHER: 013

Card 3/3

BOLDYREV, V.V.; MEDVINSKIY, A.A.

Nature of the rate limiting step in thermal and photochemical decomposition of ionic crystals. Kin.i kat. 6 no.3:550-553 My-Je '65. (MIRA 18:10)

1. Institut khimicheskoy kinetiki i goreniya Sibirskogo otdeleniya AN SSSR.

L 64298-65 EWT(m)/EPF(c)/EPF(n)-2/EWP(j)/T/EWP(t)/EWP(b) IJP(c)/MPL
EW/JD/WW/JWD/RM

ACCESSION NR: AP5020987 UR/0195/65/006/004/0732/0734 66
541.17 60
AUTHOR: Boldyrev, V. V.; Savintsev, Yu. P.; Komarov, V. F. B

TITLE: Effect of water vapor pressure on the growth rate of nuclei in the thermal decomposition of ammonium perchlorate

SOURCE: Kinetika i kataliz, v. 6, no. 4, 1965, 732-734

TOPIC TAGS: thermal decomposition, ammonium compound, vapor pressure, single crystal, vaporization, nucleation, photography

ABSTRACT: Crystals of ammonium perchlorate were grown by the slow isothermal evaporation of a saturated solution of ammonium perchlorate. The most perfect crystals, with a predominantly developed rhombic face structure, were chosen under a microscope. The crystal to be investigated was placed in a thermal chamber fastened on the stand of a MBI-3 microscope. The construction of the chamber made possible observation and photography of the crystal, measurement of the temperature of the crystal at the moment of dissociation, and carrying out of the decomposition in a given gas atmosphere. Air was flowed through the chamber at a constant rate of 6 liter/hour and the crystal was photographed at

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L 64298-65
ACCESSION NR: AP5020987

6

determined time intervals. Kinetic measurements were made by comparison of the number of nuclei and their dimensions during the course of the process. All experiments were carried out at a temperature of 230 ± 1C. Article shows photos of the crystal surface, and gives experimental data on reaction rates. It is concluded that the change in the overall rate of the thermal decomposition of ammonium perchlorate with a different content of water vapor in the surrounding atmosphere is a function of the change in the growth rate of the nuclei. Orig. art. has: 3 figures

44,55

ASSOCIATION: Institut khimicheskoy kinetiki i goreniya SO AN SSSR (Institute of Chemical Kinetics and Combustion, Siberian Branch, AN SSSR); Tomskiy gosudarstvennyy universitet im. V. V. Kuibysheva (Tomsk State University)

44,55

SUBMITTED: 21 Jul64 ENCL: 00 SUB CODE: IC, GC

NR REF SOV: 004 OTHER: 003

Card 2/2

L 64299-65 EWT(m)/EPF(c)/EWA(d)/EWP(j)/T WW/RM

ACCESSION NR: AP5020990 UR/0195/65/006/004/0766/0766

541.7

AUTHOR: Boldyrev, V. V.; Shmidt, I. V.; Pis'menko, V. I.; Shvartsberg, M. S.; Kotlyarevskiy, I. L.; Andriyevskiy, V. N.; Komarov, V. F.

TITLE: Effect of additions of organic compounds with conjugate bonds on the rate of thermal decomposition of solid substances

SOURCE: Kinetika i kataliz, v. 6, no. 4, 1965, 766

TOPIC TAGS thermal decomposition, solid kinetics, conjugate bond system, silver compound, topochemistry

ABSTRACT: It has been observed that certain organic compounds with a system of conjugate multiple bonds exert an effect on the rate of thermal decomposition. Tests were made of the effect of neterophas additions (5% on the weight of oxalate) of conjugate alpha, omega-diarylpolyenes (I)-(IV) on the rate of thermal decomposition of silver oxalate at 133C. A figure is given which shows a plot of the degree of conversion against time. Results show that additions of the above sub-

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L 64299-65

ACCESSION NR: AP5020990

2

stances bring about just as sharp a decrease in the decomposition rate as do the inorganic additives ordinarily employed for this purpose. The effect of organic compounds on the rate of topochemical processes is evidently connected with the special characteristics of the redistribution of the electrons between the additive and the oxalate. Orig. art. has: 1 figure.

ASSOCIATION: Institute khimicheskoy kinetiki i goreniya SO AN SSSR (Institute of Chemical Kinetics and Combustion of the Siberian Branch AN SSSR)

SUBMITTED: 20Mar65 ENCL: 00 SUB CODE: GC, TD

NR REF SOV: 004 OTHER: 004

Card 2/2

BOLDYREV, V.V.

Necessary modifications and more accurate definitions in the classification of reactions involved in the thermal decomposition of solids. Kin.i kat. 6 no.5:934-935 S-O '65. (MIRA 18:11)

1. Institut khimicheskoy kinetiki i goreniya Sibirskogo otdeleniya AN SSSR.

L 60456-65 EEC(b)-2/EPA/EPF(c)/EPR/EPA(s)-2/EWT(1)/EWT(m)/EWA(c)/T Pi-4/ Pr-4/Pt-7/Paa-4 IJP(c) GG/NW/JWD

ACCESSION NR: AP5007573 S/0020/65/160/005/1136/1137 45 44

AUTHOR: Rayevskiy, A. V.; Manelis, G. B.; Boldyrev, V. V.; Votinova, L. A. 3

TITLE: Role of dislocations in the process of thermal decomposition of ammonium perchlorate crystals

SOURCE: AN SSSR. Doklady, v. 160, no. 5, 1965, 1136-1137, and insert facing p. 1135

TOPIC TAGS: ammonium perchlorate crystal, crystal defect, dislocation density, thermal decomposition

ABSTRACT: During the thermal decomposition of NH_4ClO_4 crystals, the dislocations were observed by etching the surface of the crystals in 95.5% ethanol and continuously watching it under a microscope (at high magnifications, the etchant itself served as the immersion liquid). It was shown that the etch patterns are not related to surface defects, but to dislocation loops present in the crystal, and that the highest dislocation density arises at the point where the load is applied to the crystal when its plastic deformation is carried out. Polygonization was observed when the crystals were annealed. Crystals which had first been heated up to the decomposition temperature were also etched; the dislocation density was found to be

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L 60456-65
ACCESSION NR: AP5007573

high around the nucleation center. The great similarity between the anisotropy of the arrangement of dislocations and the anisotropy of the development of the decomposition reaction of NH_4ClO_4, as well as the localization of the nucleation centers near the exits of dislocations to the surface of the crystal, point to the major role which dislocations, as structural defects, can play in the thermal decomposition of ammonium perchlorate.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics, Academy of Sciences, SSSR)

SUBMITTED: 21Jul64 ENCL: 00 SUB CODE: SS, TD

NO REF SOV: 001 OTHER: 000

Card 2/2

ZAKHAROV, Yu.A.; SAVEL'YEV, G.G.; ZHURAVLEV, V.K.; BOLDYREV, V.V.

Changes in the physicochemical properties of solids in the presence of admixtures. Part 4: Thermal decomposition of silver oxalate. Kin.i kat. 6 no.3:415-423 My-Je '65. (MIRA 18:10)

1. Tomskiy politekhnicheskiy institut imeni Kirova.

L 16126-66 EWT(m)/EWP(j)/EWP(t) IJP(c) JD/WW/JG/RM

ACC NR: AP6004177 SOURCE CODE: UR/0076/66/040/001/0003/0004

AUTHOR: Boldyrev, V.V.; Yeroshkin, V.I.

ORG: none

TITLE: Effect of irradiation on the rate of thermal decomposition of silver nitrate

SOURCE: Zhurnal fizicheskoy khimii, v. 40, no. 1, 1966, 3-4

TOPIC TAGS: silver nitrate, x ray irradiation, thermal decomposition, radiation chemistry

ABSTRACT: Experiments have shown that the change in the rate of thermal dissociation of silver nitrate at 80C as a function of the dose of absorbed x-radiation is complex in character: as the dose increases, the rate decreases at first, then increases, but always remains less than the value obtained for nonirradiated samples. The deceleration of the thermal dissociation of silver caused by x rays may be due to one of the following causes: (1) The atomic centers of silver formed by the x-irradiation of $AgNO_2$ display donor properties during heating, causing the conduction band to be enriched with electrons and thus decreasing the rate of thermal decomposition; (2) The conditions of contact at the $AgNO_2$-Ag interface are such that the metal particles do not capture electrons, as would be the case during the action of light on silver halides and silver azide; on the

Card 1/2 UDC: 541.15

L 16126-66

ACC NR: AP6004177

contrary, electrons are transferred from the metal particle, so that the electron concentration of the conduction band increases, and the rate of thermal dissociation drops. To verify these hypotheses, the photoconductivity and EPR spectra of irradiated silver nitrate at the silver nitrate-silver interface are now being studied. Orig. art. has: 1 figure.

SUB CODE: 07 / SUBM DATE: 17Dec63 / ORIG REF: 002 / OTH REF: 006

Card 2/2 SM

OBLIVANTSEV, A.N.; LYKHIN, V.M.; BOLDYREV, V.V.

Radiolysis of alkali metal perchlorates under the action of gamma irradiation. Zhur.VKHO 10 no.5:598-599 '65.
(MIRA 18:11)

1. Tomskiy politekhnicheskiy institut imeni Kirova.

BOLDYREV, V.V.; SHMIDT, I.V.; PIS'MENKO, V.I.; SHVARTSBERG, M.S.; KOTLYAREVSKIY, I.L.; ANDRIYEVSKIY, V.N.; KOMAROV, V.F.

Effect of additions of organic compounds with conjugated bonds on the rate of thermal decomposition of solids. Kin. i kat. 6 no.4: 766 Jl-Ag '65. (MIRA 18:9)

1. Institut khimicheskoy kinetiki i goreniya Sibirskogo otdeleniya AN SSSR.

ACC NR: AP6029225 SOURCE CODE: UR/0195/66/007/003/0432/0438

AUTHOR: Boldyrev, V. V.; Lykhin, V. M.; Oblivantsev, A. N.; Salikhov, K. M.

ORG: Institute of Chemical Kinetics and Combustion, SO AN SSSR (Institut khimicheskoy kinetiki i goreniya SO AN SSSR); Scientific Research Institute of Nuclear Physics, Tomsk Politechnic Institute (Nauchno-issledovatel'skiy institut yadernoy fiziki pri Tomskom politekhnicheskom institut)

TITLE: Effect of additives on the radiolysis of potassium nitrate

SOURCE: Kinetika i kataliz, v. 7, no. 3, 1966, 432-438

TOPIC TAGS: radiation chemistry, radiation effect, potassium compound, gamma irradiation

ABSTRACT: The effect of Tl^+, Sr^+, Pb^{2+}, and SO_4^{2-} on the radiolysis of KNO_3 was studied using a Co^{60} γ-source. The samples were prepared by fusing KNO_3 with 0.1-5 mol % of $TlNO_3$, $Sr(NO_3)_2$, and K_2SO_4 at 340°C. The 0.02-0.07 mm fused nitrate grains were placed in glass ampoules, sealed, and irradiated at 35°-40°C at 400 rad/sec. It was found that the Tl^+ additive results in increased radiative yield of potassium nitride, the final product of the potassium nitrate radiolysis. It was also found that up to 10^{19} ev/g doses, the Sr^{2+} and Pb^{2+} additives result in increased potassium nitride yield; doses of greater intensity produced lower potassium nitride yields than those

UDC: 541.15'17

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ACC NR: AP6029225

obtained for pure KNO_3. The SO_4^{2-} additive did not affect the radiative yield of potassium nitride as compared with pure KNO_3. The process of nitrite radiolysis is discussed in terms of the free radical mechanism. Orig. art. has: 2 figures, 1 table, 1 formula.

SUB CODE: 07,18/ SUBM DATE: 09Jun65/ ORIG REF: 003/ OTH REF: 020

Card 2/2

L 21189-66 EWT(m)/EWP(j)/EWP(t) IJP(c) JD/WW/JG/RM

ACC NR: AP6008051 SOURCE CODE: UR/0020/66/166/004/0891/0893

AUTHOR: Boldyrev, V. V.; Oblivantsev, A. N.; Raytsimling, A. M.; Uskov, Ye. M.

ORG: Institute of Chemical Kinetics and Combustion, Siberian Branch, Academy of Sciences SSSR (Institut khimicheskoy kinetiki i goreniya Sibirskogo otdeleniya Akademii nauk SSSR); Scientific Research Institute of Nuclear Physics, Tomsk Polytechnic Institute (Nauchno-issledovatel'skiy institut yadernoy fiziki pri Tomskom politekhnicheskom institut)

TITLE: The mechanism governing the effect of preliminary irradiation on the thermal decomposition of alkali metal permanganates

SOURCE: AN SSSR. Doklady, v. 166, no. 4, 1966, 891-893

TOPIC TAGS: thermal decomposition, radiolysis, manganese compound, permanganate

ABSTRACT: It is an accepted hypothesis that the acceleration in the thermal decomposition of irradiated permanganates is caused by radiochemical processes which form radiolysis products. The present study was carried out in order to find out which of these products can act as catalysts and how the mechanism of this process

UDC: 537.57 + 541.17

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L 21189-66
ACC NR: AP6008051

can be interpreted. It is shown that factors which increase the concentration of free electrons or $MnO_4^=$ ions in the permanganate lattice cause a decrease in the rate of thermal decomposition (e. g., the introduction of manganate ion into potassium and cesium permanganate crystals by cocrystallization from aqueous solutions). The solid radiolysis product catalyzing the thermal decomposition of irradiated permanganates is thought to be MnO_2 and the acceleration effect results from the combination of the following factors acting in two opposite directions: the accelerating effect of MnO_2 and inhibiting effect of $MnO_4^=$, both of which are formed during the radiolysis of permanganates. The paper was presented by Academician V. V. Voyevodskiy on 7 June 1965. Orig. art. has: 1 figure.

SUB CODE: 07/ SUBM DATE: 11May65/ ORIG REF: 010/ OTH REF: 011

Card 2/2 dda

ACC NR: AP6034397 SOURCE CODE: UR/0195/66/007/005/0788/0794

AUTHOR: Komarov, V. F.; Boldyrev, V. V.; Zhuravlev, V. K.; Ivanov, G. V.

ORG: Tomsk Polytechnical Institute im. S. M. Kirov (Tomskiy politekhnicheskiy institut); Institute of Chemical Kinetics and Combustion, SO AN SSSR (Institut khimicheskoy kinetiki i goreniya SO AN SSSR)

TITLE: The mechanism of the effect of preliminary irradiation on the rate of thermal decomposition of ammonium perchlorate

SOURCE: Kinetika i kataliz, v. 7, no. 4, 1966, 788-794

TOPIC TAGS: ammonium perchlorate, thermal decomposition, irradiation effect, contaminant effect, chlorate ion, chloride ion, radiation induced defect, ammonium compound, perchlorate, x ray irradiation

ABSTRACT: A study has been made of the acceleration mechanism of the thermal decomposition of high-purity NH_4ClO_4 preliminarily irradiated at room temperature with 200 kev x-rays on an RUP-200 apparatus. The decomposition rate of irradiated NH_4ClO_4 was compared with that of nonirradiated NH_4ClO_4 and of NH_4ClO_4 contaminated with ClO_3^- and Cl^- ions. The results of experiments conducted at 236° are given in figures 1 and 2. Curves 1, 2, 3 and 4 pertain to pure NH_4ClO_4, NH_4ClO_4 containing 0.153 mol% ClO_3^-, NH_4ClO_4 containing 1.13 mol% ClO_3^-, and NH_4ClO_4 irradiated with a dose of 4.5×10^6 rad, respectively. Discussion of the mechanism of the thermal decomposition of pure NH_4ClO_4 led to the conclusion that the decomposition is a result of losses of electrons by ClO_4^- ions to form ClO_4 free radicals. The electrons

 UDC: 546.39'137:541.5

are gained by impurity levels such as ClO_3^- ions formed in the co rse of the decomposition (Table 1). Theoretical analysis of the processes taking p ace and experimental

Table 1. Impurity content in the solid NH_4ClO_4 rer due

Degree of decomposition of NH_4ClO_4, %	Impurity content, mol%	
	Cl^-	ClO_3^-, ClO^-, ClO_2^-
16.1	0.301	0.275
23.0	0.101	0.068
30.0	0.025	0.024

results indicated that the reaction rate of the thermal decompos ion of NH_4ClO_4 increases with a decrease of the concentration of free electrons in NH_4ClO_4. In the case of irradiated NH_4ClO_4, the formation of ClO_3^- ions is pro ably not the only factors that accelerates thermal decomposition. Three possible a ditional factors are considered: 1) the arrangement of ClO_3^- ions formed at irradiatio is not that it increases their catalytic activity; 2) formation of additional radi lysis products such as, among others, Cl^- ions; however, no acceleration was observed on addition to NH_4ClO_4 of the same amounts of Cl^- ions as are formed on irradiat on; 3) formation of radiation-induced defects. Among these factors, the formation of defects appears to be most probable. Determination of the type of these defects requir further studies. A

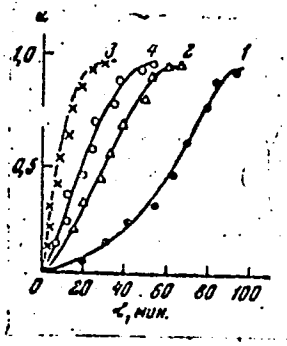

Fig. 1. Effect of irradiation or addition of ClO_3^- ions on the thermal decomposition of NH_4ClO_4

α – Portion of reacted substance; α = 1 is the decomposition of 30% of the salt specimen (maximum decomposition at low temperatures).

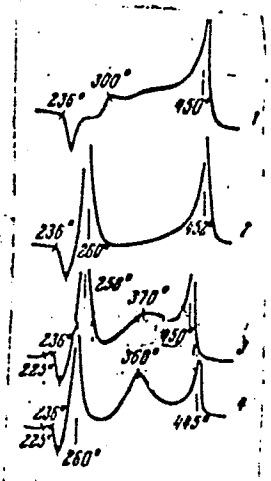

Fig. 2. Thermograms of pure, irradiated and contaminated NH_4ClO_4

similarity was established in the nature of changes of conduction, dielectric losses and decomposition rate on contamination and irradiation of NH_4ClO_4. This fact indicates that, in both cases, these changes are due to the same defe: s. Orig. art. has: 4 figures and 2 tables.

SUB CODE: 20 / SUBM DATE: 18May65/ ORIG REF: 010/ OTH RE. 017/

Card 3/3

AUTHORS: Boldyrev, Ye. I. and Ivlev, D. D. SOV/24-58-8-37/37

TITLE: Conference on the Dynamic Strength of Components in Turbo-Machinery (Soveshchaniye po dinamicheskoy prochnosti elementov turbomashin)

PERIODICAL: Izvestiya Akademii Nauk, SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 8, p 160 (USSR)

ABSTRACT: The conference took place in Leningrad between April 15 - 18, 1958. It was organized by the Commission for Gas Turbines (chairman: Yu. N. Rabotnov) and the Leningrad Council for Production of Turbines (chair: Professor S. A. Kantor) with the participation of officers of scientific research institutes, industrial firms and establishments of higher education of: Moscow, Leningrad, Kiyev, Kharkov and other cities. The conference was opened with the paper by F. M. Dimentberg (Institute of Machine Engineering, AS USSR) . . "Transverse Vibration of Shafts", in which a detailed analysis of modern methods of approach to the problems of transverse vibration of shafts was presented from the designer's point of view. The following papers were then submitted and read:

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Conference on the Dynamic Strength of Components in Turbo-Machinery

I. A. Birger (TsIAM): "Critical speeds of shafts with their associated dynamic systems" - giving the methods of determining these critical revolutions and also the ways of measuring the magnitudes of vibrations. The author gave both the theoretical and experimental approaches.
V. I. Olimpiyev (TsKTI): "Computation of critical speeds in cantilever rotors of built-up form by means of the equivalent simple cantilever" and "Stability of rotors rotating at nearly critical speeds".
V. Ya. Kal'mens (Leningrad Metallurgical Works): "Critical speeds of rotors of large turbo-generators".
A. A. Kolomiytsev (TsIAM): "Vibrations of blades in turbines" in which the resonant vibrations were discussed in detail as influenced by various factors which determine the working conditions and by the geometry of the vanes. A substantial part of the paper dealt with the aerodynamic damping.
V. V. Bolotin (MEI): "Self-induced vibration of slender rotors caused by the internal friction and the allied

Conference on the Dynamic Strength of Components in Turbo-Machinery

factors", and "Critical conditions for turbine discs whose rigidity varies periodically in the circumferential direction".
The first paper dealt mainly with the effect of hysteresis and other related non-linear factors, while the second represented the results of investigation of critical states of large finned composite discs.
V. M. Marchenko (TsAGI): "On a method of calculating the natural frequencies and modes of vibrations of blades" in which an effective approximate method of solution of the differential equation which describes the natural frequencies and their modes was given.
V. C. Kononenko (Institute of Management, Ac.Sc. USSR): "Resonance - vibration of rotors in relation to the characteristics of the motor" which dealt with the mutual dependence between the motor and the vibrating system and the specific phenomena resulting from this interdependence in the region of resonance.
A. P. Filippov (Hydraulic Machines Laboratory Ac.Sc.USSR): "Combined vibrations of discs and blades in turbo-machines"

Conference on the Dynamic Strength of Components in Turbo-Machinery

in which the author stressed the importance of treating the disc and blades jointly and showed that this may result in an appreciable lowering of frequencies especially in the case of short blades.
Ye. I. Molchanov (VTI): "Investigation of temperature distribution in the rotors of gas turbines in the cases of steady and unsteady states".
M. L. Kempner: "Vibrations of blades in turbines and the means of combatting them" in which the author has outlined a detailed analysis of a choice of ways resulting in the "tuning-out" of resonance in the fundamental mode, and also stressed the problem of "scatter" of stresses in the blades as a result of change in damping effect at their joints with the disc.
I. V. Bondarenko: "Modern practice in finish of turbine blades".
M. I. Alyamovskiy (TsNII im. A. N. Krylov): "Approximate determination of stresses in the tubes of heat exchangers and in compressor blades during the oscillations under the action of aerodynamic forces".

Conference on the Dynamic Strength of Components in Turbo-Machinery

P. A. Kashin: "Techniques of measuring deformations of turbine blades".
A. M. Soyfer (Kuybyshev Aeronautical Institute) "Survey of methods for damping of vibrations of blades in aircraft gas turbines".

All these papers were followed by a lively discussion. In resolutions the conference stressed the need for further coordination of efforts in the field of the dynamic strength analysis of turbomachinery. Recognizing the positive work of the Commission for strength analysis of gas turbines, the conference decided as appropriate to rename it into the Commission for Strength Analysis of Turbo-machinery under the auspices of the Department of Technical Sciences of the Ac.Sc. USSR. The conference agreed again on the pressing need for creation of the National Laboratory for the development of strain-measuring equipment.

Card 5/5

1. Turbines--Performance 2. Turbines--Analysis 3. Turbines --Equipment

USCOMM-DC-60040

AUTHOR: Boldyrev, Ye. I. SOV/179-59-3-43/45

TITLE: All Union Conference on the Static Stability of Turbo-Machines (Vsesoyuznoye soveshchaniye po staticheskoy prochnosti turbomashin)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1959, Nr 3, pp 213-215 (USSR)

ABSTRACT: The conference took place on February 9-12, 1959, in Leningrad and was convened by the Commission on Stability of Gas Turbines of the Institute of Mechanics, Ac.Sc., USSR (Chairman of the Commission Mr. Yu. N. Rabotnov) in conjunction with the Leningrad Technological Board on Turbo-construction. 22 papers were read, mainly on the subject of the stability of components of turbo-machines such as discs and rotors. The conference recommended wider application of electronic computers in practical calculations. The following personalities were mentioned: V.P. Rabinovich (TsNIITMASh), Yu.N. Rabotnov (Institute of Hydrodynamics, AS USSR); A.D. Kovalenko (Institute of Construction Engineering, AS USSR); Ye.P. Plotkin (VTI); Ya.A. Shustorovich (Leningrad Metallurgical Plant); B.F. Shorr (TsIAM imeni P.I. Baranov); A.V. Amel'yanchik (TsIAM imeni P.I. Baranov); Ye.I. Molchanov (VTI);

Card 1/2

All Union Conference on the Static Stability of Turbo-Machines

SOV/179-59-3

I.A. Birger (TsIAM imeni P.I. Baranov); B.Ya. Britvar (Leningrad Metallurgical Plant); L.M. Kachanov (Leningrad State University); M.A. Radtsig (TsKTI imeni Polzunov); B.Ye. Sivchikov (LKVVIA imeni A.F. Mozhayskiy); I.A. Oding, Z.G. Fridman, V.N. Geminov (Institute of Metallurgy, AS USSR, imeni A.A. Baykov); B.V. Zver'kov (TsKTI imeni Polzunov); V.S. Chernina (TsKTI imeni Polzunov); R.N. Sizov (TsIAM imeni P.I. Baranov); V.I. Rozenblyum (TsKTI imeni Polzunov); L.A. Il'in (Institute of Construction Engineering, AS USSR).

Card 2/2

AUTHOR: Boldyrev, Ye. I. SOV/179-59-3-44/45

TITLE: Coordination Conference on the Stability of Gas Turbines (Koordinatsionnoye soveshchaniye po prochnosti gazovykh turbin)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1959, Nr 3, p 215 (USSR)

ABSTRACT: The conference took place on January 6-7, 1959 at the Institute of Mechanics, Ac.Sc., USSR and was convened by the Commission on Stability of Gas Turbines of the Institute of Mechanics, Ac.Sc., USSR. The conference made the following recommendations:
1) that there should be closer coordination between research institutes, works and other centres carrying out research in this field;
2) that work should be started on building tensormetric apparatus for the investigation of static and dynamic deformations due to heat;
3) that results or information about work being carried out on the stability of turbo-machines should be sent to the Commission to enable them to circulate the information to interested scientific bodies.

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26.2120

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AUTHOR: Boldyrev, Ye.I.

TITLE: Conference on the Static Strength of Components in Turbo-Machinery

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1960, No 4, pp 191-192

TEXT: A conference took place in Leningrad between 17th and 20th May 1960 concerned with the static strength of components in turbo-machinery. The conference was called by the Commission for Strength Problems in Gas Turbines at the Institute of Mechanics, Academy of Sciences of the USSR, and by the Leningrad Technical Council on Turbine Construction. About 200 representatives of academic and departmental scientific research institutes, technical universities and plants from Moscow, Leningrad, Kiyev, Khar'kov, Chelyabinsk, Novosibirsk, Sverdlovsk and other cities, heard 27 papers. I.A. Birger read a paper by R.S. Kinasoshvili, "Determination of the Reserves of Strength at Non-Stationary Temperatures and Loads". T.N. Zakhorova and R.N. Sizova devoted their paper to the problem of damage in heat resisting alloys under

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prolonged static loads at elevated temperatures. The authors carried out tests of short time tensile strength, creep strength and fatigue strength of smooth specimens which had previously been held for different periods under a static load in order to determine the effect of cracks on the mechanical properties of heat resisting alloys of the EI-437 and EI-617 type, and in order to select the nature of the damage. It was shown that the tendency to sustain damage depends on the testing temperature and the conditions preceding the final loading. L.M. Kachanov (Leningrad) in his paper "Theoretical Examination of Failures under Creep Conditions" discussed the method previously proposed by him for predicting the endurance strength of components. This method takes into account both the large creep deformations and the process of crack formation. Certain problems of determining the endurance strength of components subject to brittle failures were analysed in detail. A.N. Grubin (Leningrad), in his paper "Stress Concentration in Tension under the Conditions of a Plane or an Axially Symmetrical Deformation with a Non-linear Relationship between Stresses and Deformations" discussed the problem of the analysis of the stressed state in the critical

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minimum cross-section of a flat and cylindrical notched specimen under the conditions of small elasto-plastic deformations and small creep deformations. The solution of this problem can be utilised for the design of firtree gas turbine blade roots and the analysis of tests upon cylindrical notched specimens at room and elevated temperatures. A paper by I.L. Mirkin (Moscow) was devoted to the analysis of ways and prospects in the development of new heat-resisting materials for gas turbine components. In the paper by A.V. Stanyukovich (Leningrad) "On Materials for Stationary Gas Turbines", much attention was given to the evaluation of the deformation capacity of materials with the help of plasticity diagrams. The paper by I.P. Bulygin, A.T. Gorbodey and N.S. Gerchikova (Moscow) was concerned with the effect of non-steady state loading on the microstructure and the heat resisting properties of gas turbine blade alloys. V.P. Sdobyrev (Moscow), in his paper "Endurance Strength Criteria of Certain Heat Resisting Alloys in a Complex Stressed State", reported the result of the experimental investigation of the endurance strength of thin-walled tubular specimens (of EI-437B and EI-405 alloys) under a complex stressed

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state. An empirical criterion of endurance strength was established. The paper by B.D. Grozin (Kiyev), "Increase of the Service Reliability of Rolling Bearings for Gas Turbines" was devoted to the results of investigations carried out at the Institute of Mechanics of the Academy of Sciences of the Ukrainian SSR in conjunction with the Kirov Works, and concerned with raising the service reliability of such bearings. V.I. Rozenblyum (Leningrad) read a paper entitled "The Design of Turbine Castings by the Limit Load Principle". A.P. Drozdov (Leningrad) lectured on problems of the design of joints of cylindrical turbine casings. A.P. Dinerman (Moscow) in his paper "On the Effect of Starting Procedures on the Strength of Turbine Discs" reported the results of an experimental investigation carried out at the TsNIITMASh Institute. The paper by V.N. Bulgakov (Khar'kov), "On the Interaction of a Pipeline and a Toroidal Flexible Joint" was devoted to the analysis of a system consisting of a straight pipeline and a toroidal flexible joint when loaded by internal pressure and subjected to the temperature of the working medium. The results of a stress and displacement analysis were given for seven variants of flexible joints as carried out at the

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Hydraulic Machinery Laboratory of the Academy of Sciences of the Ukrainian SSR. The analysis was performed by the method of finite differences utilising the "Strela" electronic computer. I.A. Kozlov (Kiyev) in a paper "Certain Results of an Experimental Investigation of the Carrying Capacity of Discs" reported on experiments carried out at the Powder Metallurgy and Special Alloys Institute of the Academy of Sciences of the Ukrainian SSR. O.V. Sosnin (Novosibirsk) read a paper on "Redistribution of Stresses in a Solid Disc as a result of Creep". K.I. Terekhov (Moscow) in a paper "Analysis of Failures of Turbo-jet and Propeller Gas Turbine Discs and Methods for their Prevention", discussed the basic defects and the nature of failures in turbine discs under service conditions (excessive creep, brittle failure in the blade root connection with the disc and failures in the central part of the disc) and methods for their prevention. In a paper "Two-Dimensional Tables for the Analysis of Conical Shells with a Linearly Varying Thickness Compiled with the Help of the Electronic Digital Computer STRELA", Ya.M. Grigorenko and N.A. Lobkova (Kiyev) put forward a method of analysis of the stressed

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state of axially symmetrically deformed conical shells with linearly varying thickness due to different types of loading forces and to non-uniform heating under different boundary conditions. The procedure is based on the utilisation of two-dimensional tables. A paper by Ye.I. Molchanov and Ye.R. Plotkin (Moscow) was devoted to the results of computing temperature fields in a cooled gas turbine disc by means of a hydraulic integrator, and also to a procedure for the approximate computation of temperature fields and stresses in a blade under transient condition. Ch.G. Mustafin (Leningrad) read a paper on the effect of clearances between the contact surfaces of teeth in multi-tooth root connections of turbine rotor blades on the load distribution among the teeth. Ya.I. Yevseyev (Sverdlovsk) in his paper "Strength Analysis of Flat Round Flanges" put forward a procedure to determine their limiting carrying capacity and deformation. I.A. Birger (Moscow) read a paper entitled "The Analysis of Discs and Shells Orthotropic by Design". The paper by A.S. Grigor'yev (Moscow), "On the Elasto-Plastic Deformations of Bars, Discs and Plates made of Plastically Non-homogeneous Material" was devoted to investigations of the

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stressed state in bars, discs and plates made of materials homogeneous under elastic conditions but non-homogeneous under plastic conditions. A.V. Amel'yanchik (Moscow), in his paper "Solution of Problems of Plastic Deformation of Thin Shells of Revolution with the Help of the Electronic Digital Computer STRELA", examined the stressed state of thin single layer shells of revolution at small elasto-plastic deformations. V.S. Mandel' (Nikolayev) lectured on "Development of Methods of Analysis of Gas Turbine Designs". The paper by V.I. Rozenblyum and V.S. Chernina (Leningrad) was devoted to the strength and creep analysis of turbine diaphragms. Examples of numerical analysis were given and compared with measurements. Among the resolutions of the Conference was the call for more work in the field of experimental study of the strength of the basic elements of turbo-machinery both under steady state and non-stationary conditions. Testing machines for the simultaneous testing of many specimens are being developed which will allow a statistical treatment of test results.

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Conference on the Static Strength of Components in Turbo-Machinery

The recent increase in experimental work in the field of creep and long time strength of materials and components is not thought sufficient.

There are no figures, tables or references.

Card 8/8

BOLDYREV, Ye.I.

Dynamic strength of trubomachines; conference in Leningrad.
Vest. AN SSSR 35 no.2:110 F '65.
(MIRA 18:3)

BOLDYREV, Ye.N.

Some consideration on the use of Form N-36 for the annual report of the sanitary and epidemiological station. Gig. i san. 25 no.4:103-106 Ap '60. (MIRA 13:8)

1. Iz Luganskoy oblastnoy sanitarno-epidemiologicheskoy stantsii. Gosudarstvennyy sanitarnyy inspektor po planirovke naselennykh mest.
(LUGANSK PROVINCE—HOSPITALS—ADMINISTRATION)

GAN, G.S., prof.; GRECHISHKIN, D.K., prof.; BONDAR', V.A., dotsent; SKRIPKA, V.K., kand. med. nauk; BOLDYREV, Ye.N., kand. med. nauk; PASHCHENKO, N.P., kand. med. nauk; SYROYEZHKIN, P.V., inzh.; KLIMOV, D.D., inzh.

Hygienic conditions and labor safety at Donetsk hydraulic mines. Ugol' 39 no.9:87-88 S '64. (MIRA 17:10)

1. Luganskiy meditsinskiy institut (for Gan, Grechishkin, Bondar', Skripka, Boldyrev, Pashchenko). 2. Ukrainskiy nauchno-issledovatel'skiy institut gidrodobychi uglya (for Syroyezhkin, Klimov).

ACC NR: AP6008770 SOURCE CODE: UR/0240/66/000/002/0016/0020

AUTHOR: Butkovskaya, Z. M.; Boldyrev, Yu. G.

ORG: Scientific Research Institute of Industrial Hygiene and Occupational Diseases, Leningrad (Nauchno-issledvatel'skiy institut gigiyeny truda i professional'nykh zabolevanii)

TITLE: Change of muscle biopotentials under the influence of high-frequency vibrations

SOURCE: Gigiyena i sanitariya, no. 2, 1966, 16-20

TOPIC TAGS: vibration effect, muscle bioelectric activity, electromyograph, dynamometer

ABSTRACT: The effect of high-frequency vibration on the bioelectrical activity of palm muscles (thenar group) was studied. Three subjects were repeatedly exposed to sinusoidal high-frequency vibration and vibration of complex spectral composition (from an operating pneumatic drill). Biopotentials were measured with a "Biofizpribor" electromyograph and an amplifier connected to a loop oscillograph. The following series of vibration tests were conducted: 1) high-frequency vibration of complex spectral composition (frequency up to 100 cps and higher); 2) vibration at 250 cps with acceleration of 5 G; 3) 1000 cps with 12 G; 4) 2000 cps with 15 G; and 5) control test consisting of static load (8 kg) without vibration. Muscle poten-

Card 1/2 UDC: 612.743.014.45+613.644

tials in series two—five were recorded before vibration, in the first, sixth, and tenth minutes of vibration, and immediately after vibration. An electrodynamic testing device equipped with a dynamometer created the necessary vibration. During the ten-minute vibration period the subject pressed his palm to the stand with 8 kg of force. While the biocurrents were being recorded, he rested his hand on the vibrating device without pressure and squeezed a polyethylene bulb connected to a manometer with his first and second fingers. It was found that under the influence of vibration of complex spectral composition no one type of change in electrical activity predominated. This was explained by the composition of the vibration spectrum, which included frequencies having opposing effects on the organism. It was demonstrated that when the subject is exposed to vibration on a background of static load, the normal process of increase in the electrical activity of muscles after cessation of static load is destroyed at vibration frequencies of 1000 and 2000 cps. In addition, vibration at 250 cps and above alters the normal reaction of increase in electrical activity at the moment of static load. Sinusoidal vibration, it was concluded, causes a predominance of reactions of decreased electrical activity and phase changes of electrical activity. This may be connected with the development of inhibition in nerve centers and disruption of circulation in upper extremities under the influence of vibration. Vibration of complex spectral composition was found to cause changes in biopotentials different from those occurring when high-frequency components of this spectrum were taken separately. However, these high-frequency components influence the character of electrical acitvity (phase reactions and reactions of decreased excitability). Orig. art. has: 2 figures. [JS]

SUB CODE: 06/ SUBM DATE: 21Sep64/ ORIG REF: 006/ OTH REF: 001/ ATD PRESS: 4227

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CHUPRAKOVA, I.M., inzhener; BOLDYREV, Yu.N., inzhener.

Mechanizing the loading of sand and gravel into filter presses. Bum. prom. 31 no.12:21-22 D '56. (MLRA 10:2)

1. Vtoroy Kaliningradskiy tsellyulozno-bumazhnyy kombinat.
(Filter presses) (Material handling)

CHUPRAKOVA, I.M.; BOLDYREV, Yu.N., prepodavatel'.

Restoring flow of artesian wells. Bum. prom. 33 no.3:17-18 Mr '58. (MIRA 11:4)

1. Nachal'nik tsekha vodosnabzheniya vtorogo Kaliningradskogo kombinata (for Chuprakova). 2. Kaliningradskiy tsellyulozno-bumazhnyy tekhnikum (for Boldyrev).

(Artesian wells)

BOLDYREV, Yu.N., prepodavatel'

Repair of drum-filter with a fibrous underlayer. Bum.prom. 34 no.3:24-25 Mr '59. (MIRA 12:4)

1. Kaliningradskiy politekhnicheskiy institut.
(Filters and filtration--Maintenance and repair)

BOLDYREV, Yu.N., prepodavatel'; NEGONOV, M.I., mekhanik

Automatic sawing and loading of pulpwood into pulp cars. Bum. prom. 35 no.10:23-24 O '60. (MIRA 13:10)

1. Leningradskiy politekhnikum (for Boldyrev).
(Kaliningrad—Woodpulp industry—Equipment and supplies)

BOLDYREV, Yu.N., prepodavatel'

Increase of the productive capacity of steam jet refrigerating machines. Bum.prom. 36 no.5:23-24 My '61. (MIRA 14:5)

1. Kaliningradskiy politekhnikum.
(Kaliningrad—Paper industry—Equipment and supplies)
(Refrigeration and refrigerating machinery)

BOLDYREV, Yu.N.

Selectifiers for cleaning high-concentration stock. Bum. prom. 36 no.10:26 O '61. (MIRA 15:1)
(Papermaking machinery)

BOLDYREV, Yu.N., inzh.

Water purification in cone hydrocyclones. Bum.prom. 38 no.9: 23-24 S '63. (MIRA 16:11)

VINNIK, L.A., dotsent; SUTYRINA, G.V.; BOLDYREVA, A.A.; SHEVCHENKO, A.M.

Growth rate of Mycobacterium tuberculosis and isoniazid concentration in resected lungs. Prob. tub. no.1:75-78 '65. (MIRA 18:12)

1. Fakul'tetskaya terapevticheskaya klinika (zav.- prof. A.M. Nogaller) Astrakhanskogo meditsinskogo instituta i Astrakhanskiy oblastnoy protivotuberkuleznyy dispanser (glavnyy vrach A.P. Demidova).

KALINICHENKO, I.I.; BOLDYREVA, A.I.

Trilonometric determination of nickel and copper from a single weighed sample in constantan-type alloys. Trudy Ural.politekh. inst. no.96:161-165 '60. (MIRA 14:3)
(Nickel-copper alloys)

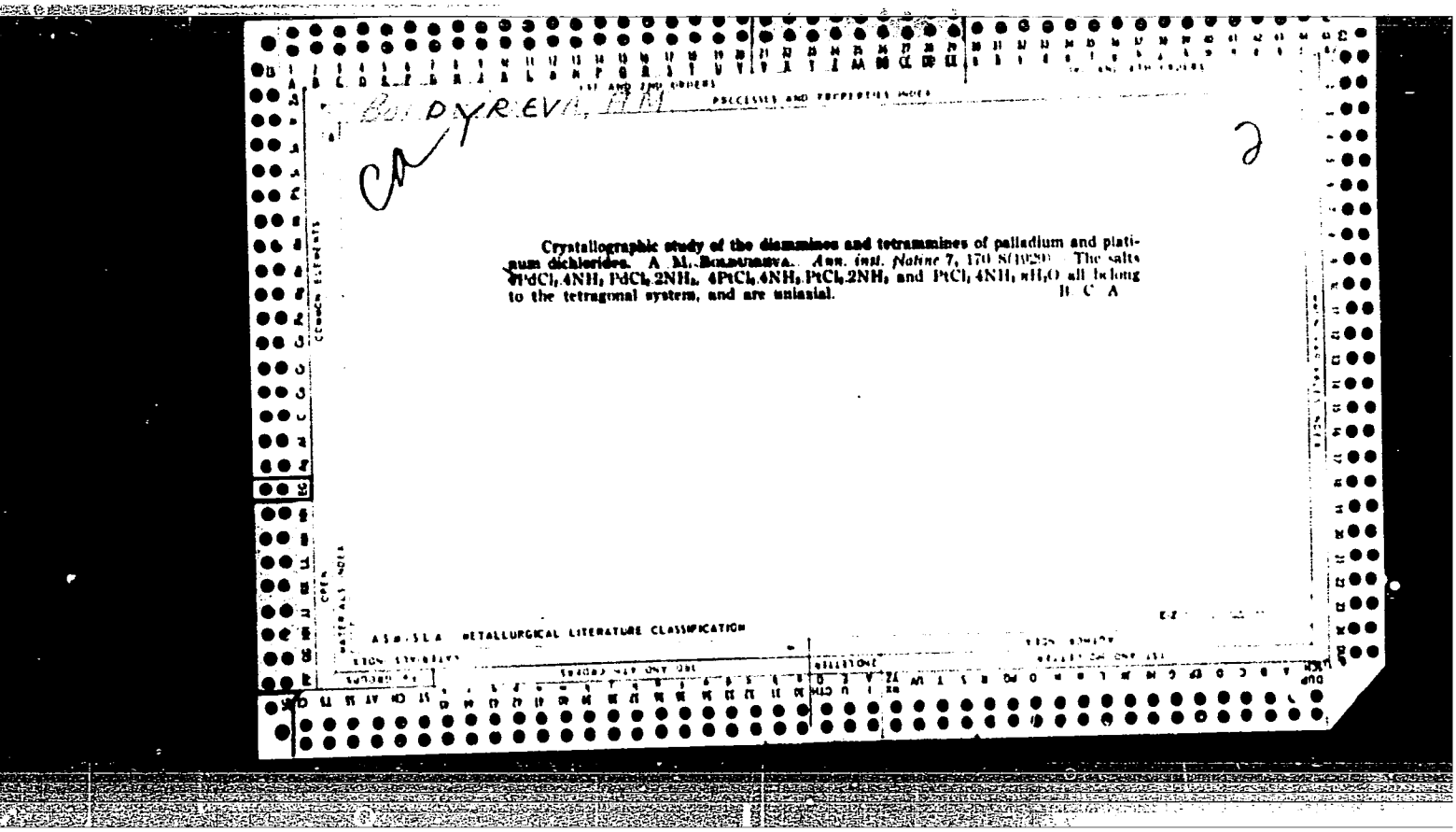
BOLDYREVA, A.I., assistent; KALINICHENKO, I.I., dotsent, kand. khim. nauk

Determination of nickel in steels and permalloys by the use of Trilon B. Sbor. nauch. trud. Ural. politekh. inst. no.122: 128-132 '61. (MIRA 17:12)

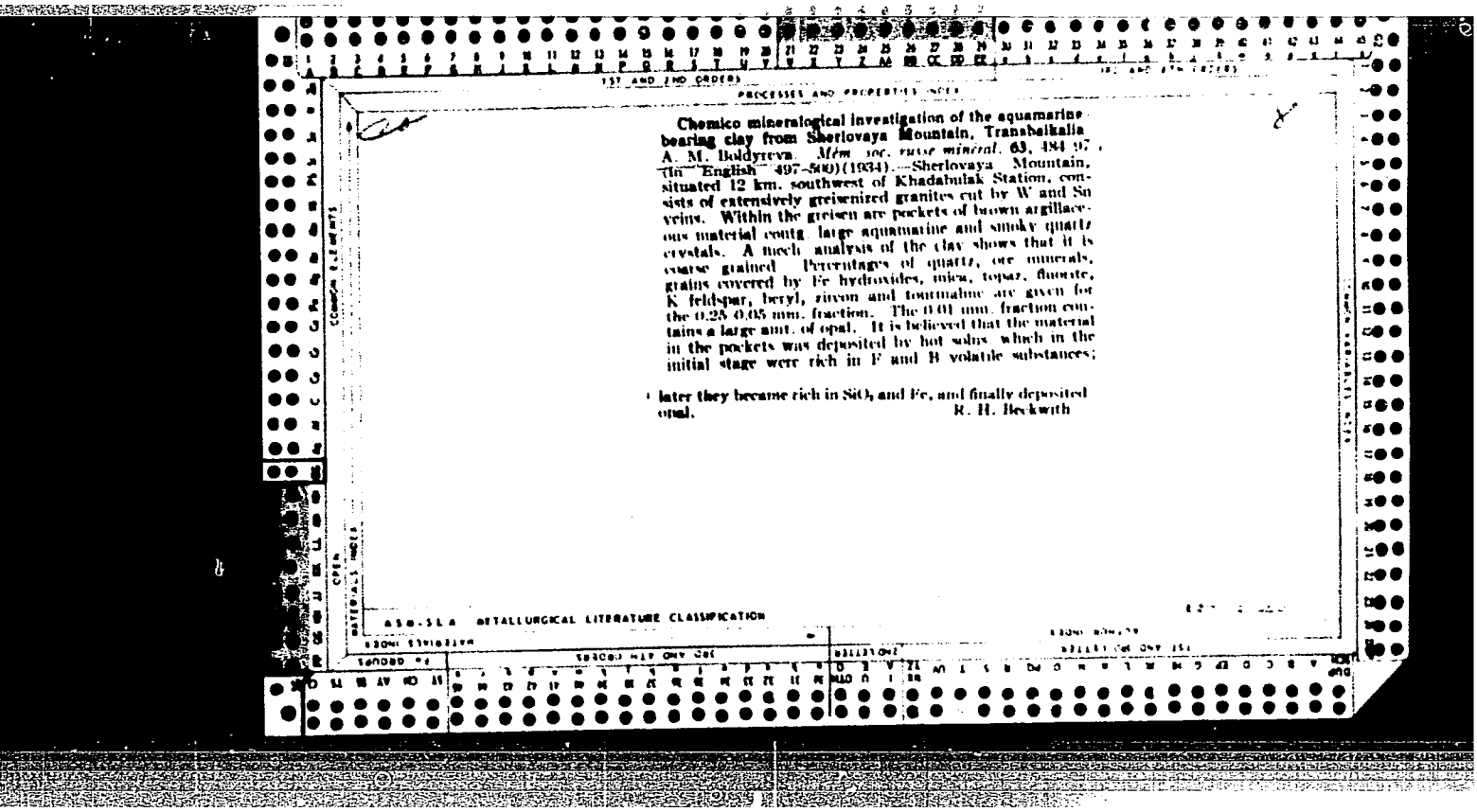
PASHKOV, B.M.;KARACHEVTSEVA, V.N.;ROBUSTOV, G.V.;KHAMAGANOVA, A.V.;ANDROSOVA, A.A.;BELYAKOVA, A.G.;GENKINA, G.B.;ZATURENSKAYA, P.O.;VYMEKAYEVA, M.A.; GOL'DENBERG, M.M.;BOLDYREVA, A.M.

Results of the treatment of syphilis in children according to standards of the Ministry of Health of USSR. Vest. vener., Moskva no.2:28-34 Mar-Apr 1953. (CIML 24:3)

1. Pashkov, Karachevtseva, Robustov, and Khamaganova of Central Dermato-Venereological Institute (Director -- Candidate Medical Sciences N. M. Turanov); Androsova, Belyakova, Genkina, and Zaturenskaya of Hospital imeni Korolenko; Vymekayeva and Gol'denberg of Second Moscow Venereal Dispensary (Head -- Candidate Medical Sciences V. G. Bronshteyn); and Boldyreva of First Venereal Dispensary (Head -- K. A. Vinogradova).

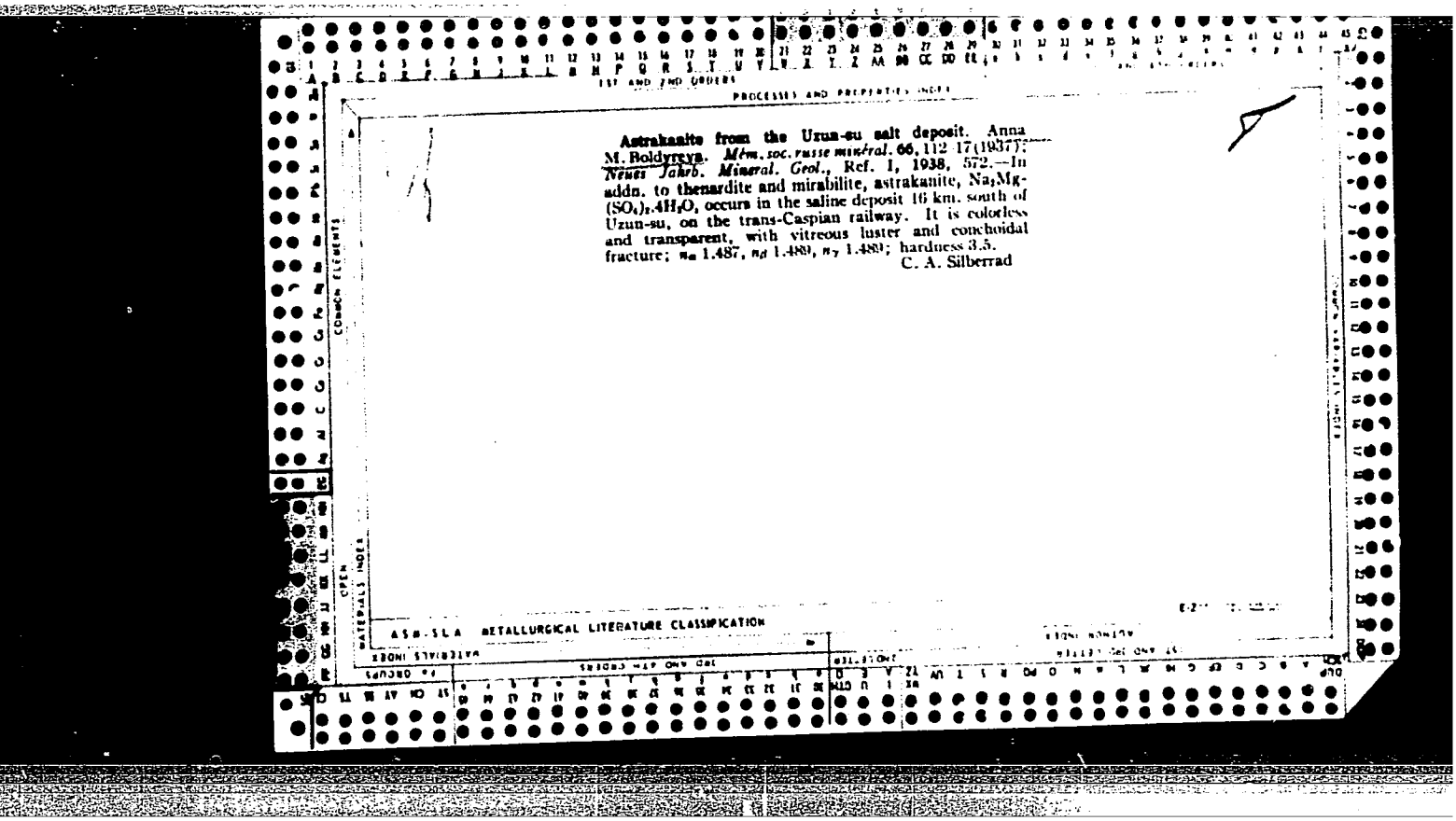


Crystallographic study of the diammines and tetrammines of palladium and platinum dichlorides. A. M. Samsonova. *Ann. inst. Platine* 7, 170-8(1929). The salts $PtCl_2 4NH_3$, $PdCl_2 2NH_3$, $4PtCl_4 4NH_3$, $PtCl_4 2NH_3$ and $PtCl_4 4NH_3 xH_2O$ all belong to the tetragonal system, and are uniaxial.
B C A

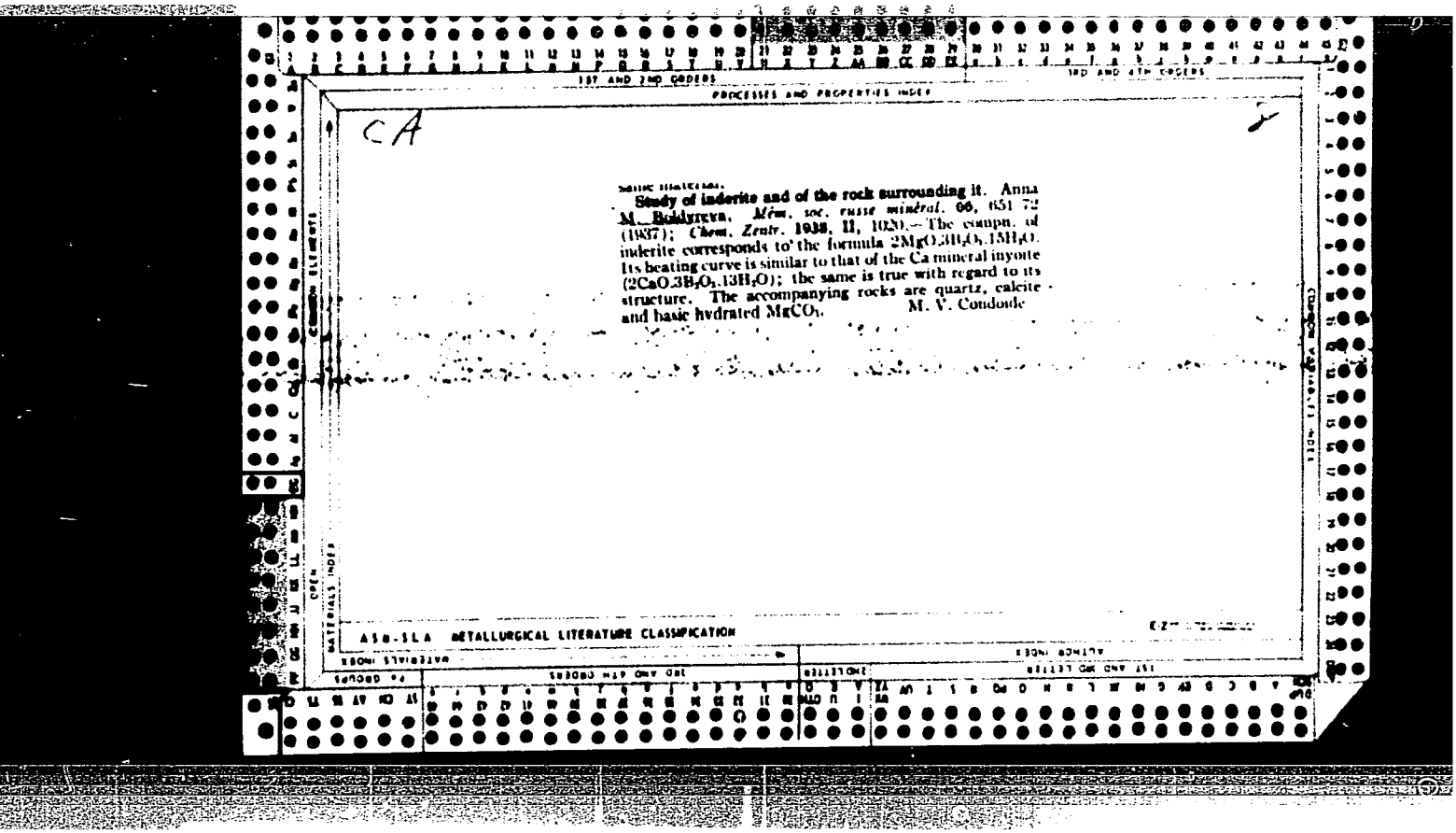


Chemico mineralogical investigation of the aquamarine-bearing clay from Sherlovaya Mountain, Transbaikalia. A. M. Baldyreva. *Mém. soc. russe minéral.* **63**, 484-97 (In English 497-500)(1934).—Sherlovaya Mountain, situated 12 km. southwest of Khadabulak Station, consists of extensively greisenized granites cut by W and Sn veins. Within the greisen are pockets of brown argillaceous material contg. large aquamarine and smoky quartz crystals. A mech. analysis of the clay shows that it is coarse grained. Percentages of quartz, ore minerals, grains covered by Fe hydroxides, mica, topaz, fluorite, K feldspar, beryl, zircon and tourmaline are given for the 0.25-0.05 mm. fraction. The 0.01 mm. fraction contains a large amt. of opal. It is believed that the material in the pockets was deposited by hot solns. which in the initial stage were rich in F and B volatile substances; later they became rich in SiO_2 and Fe, and finally deposited opal.

R. H. Beckwith



Astrakanite from the Uzun-su salt deposit. Anna M. Boldyreva. *Mém. soc. russe minéral.* 66, 112–17 (1937); *Neues Jahrb. Mineral. Geol.*, Ref. I, 1938, 572.—In addn. to thenardite and mirabilite, astrakanite, $Na_2Mg(SO_4)_2.4H_2O$, occurs in the saline deposit 16 km. south of Uzun-su, on the trans-Caspian railway. It is colorless and transparent, with vitreous luster and conchoidal fracture; n_a 1.487, n_d 1.488, n_γ 1.489; hardness 3.5.
C. A. Silberrad



CA

Study of inderite and of the rock surrounding it. Anna M. Boldyreva. *Mém. soc. russe minéral.* **66**, 651-72 (1937); *Chem. Zentr.* **1938**, II, 1020.—The compn. of inderite corresponds to the formula $2MgO.3B_2O_3.15H_2O$. Its heating curve is similar to that of the Ca mineral inyoite ($2CaO.3B_2O_3.13H_2O$); the same is true with regard to its structure. The accompanying rocks are quartz, calcite and basic hydrated $MgCO_3$. M. V. Condodc

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
Mineralogical and
Geological Chemistry

Authigenic analcime in Upper-Permian sediments of the Chkalova and Aktyubinsk districts. A. M. Boldyreva. *Zapiski Vsesoyuz. Mineralog. Obshchestva* (Mém. soc. russe minéral.) 82, 291–7(1953).—Macroscopic analcime (I) crystals are rarely observed, in lenses of a few mm. diam. and length in limestones and marls. In clastic sediments, such lenses are absent, but in the light fractions I is easily enriched and identified by microscopic and x-ray methods. In thin sections I is seen lining cavities and cracks, with calcite as the filling material, or replacing shells of ostracods. Another type of I is crystd. in polymict sandstones, mostly with little developed crystal forms. It is isotropic, with n varying from 1.478 to 1.489 ± 0.002. Previously, this I had been described as fluorite or opal. Heating curves show the clear effects of zeolitic dehydration from 150° to the loss of crystn. H_2O at 640–660°, and exothermic effects at 550°, 920°, 1080°, and 1200°. A map. is given which shows the regional distribution of I-contg. sediments over a wide region along the Ural River near Chkalov and Uralsk. The chem. constituents of I may have been derived from decompd. aluminosilicates of effusive feldspar-rocks.

W. Eitel

BOLDYREVA, A. S.

"Data on the Epidemiology of Botkin's Disease (Epidemic Hepatitis) in the City of Gor'kiy and in Gor'kovskaya Oblast." Cand Med Sci, Gor'kiy State Medical Inst imeni S. M. Kirov, Gor'kiy, 1955. (KL, No 14, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

DREYZIN, R.S.; BOLDYREVA, A.S.; ISACHENKO, V.A.; KNYAZEVA, L.D.

Outbreak of adenovirus diseases in Gorkiy. Vop. virus. 5 no. 2:183-189 My-S '60. (MIRA 14:4)

1. Otdel grippa i ostrykh katarov Instituta virusologii imeni D.I. Ivanovskogo AMN SSSR, Moskva.
(GORKIY—ADENOVIRUS INFECTIONS)

POLDYREVA, A.V.

POLDYREVA, A.V. -- "Complex Compounds of Uric Acid with Amines." Min Higher Education USSR. Tomsk Order of Labor Red Banner Polytechnic Inst imeni S. M. Kirov. Tomsk, 1955
(Dissertation for the Degree of Candidate in Chemical Sciences).

SO: Knizhnaya Letopis', No 9 1956

BOLDYREV, V.V.; PINAYEVSKAYA, E.N.; BOLDYREVA, A.V.; ZAKHAROV, Yu.A.; KONYSHEV, V.P.

Effect of preliminary irradiation and chemical treatment on the thermal decomposition rate of silver permanganate. Kin. i kat. 2 no.2:184-187 Mr-Ap '61. (MIRA 14:6)

1. Tomskiy politekhnicheskiy institut imeni S. M. Kirova.
(Silver permanganate)

L 06181-67 EWT(m)/EWP(j)/EWP(t)/ETI IJP(c) JD/WW/JW/JH/RM/AR

ACC NR: AP6030705 (A,N) SOURCE CODE: UR/0195/66/007/004/0734/0736

51
B

AUTHOR: Boldyreva, A. V.; Mozzhova, V. N.

ORG: Institute of Chemical Kinetics and Combustion, CO AN SSSR (Institut khimicheskoy kinetiki i goreniya CO AN SSSR)

TITLE: Nature of the effect of additives on the thermal decomposition of ammonium perchlorate

SOURCE: Kinetika i kataliz, v. 7, no. 4, 1966, 734-736

TOPIC TAGS: ammonium perchlorate, [redacted] perchlorate, thermal decomposition, combustion modifier, ammonium compound

ABSTRACT: A study has been made of the character of the interaction of ZnO, CdO, and PbO with ammonium perchlorate. This work was prompted by recent interest in the effect of additives on the rate of thermal decomposition of ammonium perchlorate. Visual observation of pellets of ammonium perchlorate mixed with CdO, ZnO, and PbO (1—20%) on heating to 300C in a special chamber, and IR spectroscopy and solubility tests on the mixture before and after the decomposition were carried out. It was shown that on ammonium perchlorate decomposition in the presence of CdO, ZnO, or PbO, chemical reactions take place between the mixture components to form perchlorates of the appropriate metals. [W.A. 68] [SM]

SUB CODE: 07,20/ SUBM DATE: 08Oct65/ ORIG REF: 002/ OTH REF: 009/

Card 1/1 pla UDC: 541.17

CHIBUNOVSKIY, V.A.; BOLDYREVA, A. Ya.

Complicated intratracheal anesthesia in the removal of a neurofibroma of the posterior mediastinum spreading into the thoracic part of the trachea. Trudy Inst. klin. i eksp. khir. AN Kazakh. SSR 9:161-164 '63. (MIRA 17:12)

S/102/62/000/002/001/004
D201/D302

16.4000

AUTHOR: Hryshchenko, L.Z. and Boldyreva, D.F. (Kiyev)

TITLE: The invariance of on-off automatic control systems

PERIODICAL: Avtomatika, no. 2, 1962, 3-12

TEXT: The author considers the conditions of invariance with respect to an external disturbance of a closed-loop on-off control system. Since in a general case the on-off system cannot be described by a single system of linear differential equations, the difference equations for a closed-loop are derived. Since the coefficients of obtained differential equations are very cumbersome in the case of the general type of on-off system, the conditions of invariance are derived for a system operating from the deviation of the controlled quantity, by applying to the difference equations the discrete Laplace and D-transformation. As a result the conditions for the independence of a controlled parameter on disturbance are obtained and the method is shown of determining the compensating circuits. All conditions of in-

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variance cannot, however, be satisfied because of the inertia of the measuring and executive elements and only the ε-invariance in such a system may be obtained. The present work has been carried out at the laboratoriya teoreticheskikh razrabotok voprosov informatsii, upravleniya i modelirovaniya instituta avtomatiki gosplana UkrSSR (Laboratory of Theoretical Studies of Information, Control and Simulation Problems of the Automation Institute of the State Planning Board of the UkrSSR). There are 17 references: 15 Soviet-bloc and 2 non-Soviet-bloc. The reference to the English-language publication reads as follows: Julius Tou, Proc IRE, v. 45, no. 9, September 1957

SUBMITTED: February 17, 1961

L 20019-65 EWT(d)/EWP(1) Po-4/Pq-4/Pg-4/Pk-4/Pl-4 IJP(c)/AEDC(a)/
ASD(a)-5/ASD(d)/AFMDC/APETR/RAEM(d)/ESD(dp) EC
ACCESSION NR: AR4044799 S/0271/64/000/006/A029/A029

SOURCE: Ref. zh. Avtomatika, telemekhanika i vy*chislitel'naya tekhnika. Svodny*y tom, Abs. 6A182

AUTHOR: Grishchuk, V. P.; Samoylenko, V. P.; Boldy*reva, D. F.

TITLE: Determining the parameters for setting an intermittent-control system in the case of linear disturbance

CITED SOURCE: Sb. Tekhn. kibernetika. Kiyev, Gostekhizdat USSR, 1963, 69-80

TOPIC TAGS: automatic control, automatic control theory

TRANSLATION: When the error introduced by self-oscillations in the system can be neglected, the maximum deviation of the controlled variable from its steady-state preset value serves as a measure of accuracy of the control process. This condition is satisfied when the external disturbance is fairly slow and can be regarded, within a small interval, as a linear function of time. The accuracy is assessed of an automatic control system which encompasses a first-kind plant with a delay and a discrete controller represented by a second-kind pulse element. The control-

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L 20019-65
ACCESSION NR: AR4044799

system dynamics is investigated by the method of difference equations. It is noted that the controlled variable takes on a maximum value at the time moments determined by an integer number of periods plus the delay time. The maximum deviation is evaluated; it depends on the settings of the controller and the pulse element. The controlled-variable minimum equals to the average value of the same parameters; the swing of oscillations depends only on the control period. Stability of the automatic control system is analyzed, and stability limits in the parametric plane are determined on the basis of a modified Raus-Hurwitz criterion. Optimum setting parameters (in the sense of minimum deviation of the controlled variable from its preset value) are determined. An additional case is considered when the derivative-type correction is absent. Dynamic errors in discrete and continuous analog systems are compared; with a small relative delay, the discrete system is found to provide better accuracy than a structurally similar analog system. Six illustrations. Bibliography: 2 titles.

SUB CODE: DP, IE ENCL: 00

Card 2/2

BORODULINA, V.V.; BOLDYREVA, G.G.; VISHOMIRSKIS, R.M. [Visomirskis, R.]; MOLCHADSKIY, A.M.

Study of the process of electrodeposition of palladium from tetrammine chlorite solutions. Trudy AN Lit.SSR. Ser. B. no.2: 49-59 '65. (MIRA 19:2)

1. Institut khimii i khimicheskoy tekhnologii AN Litovskoy SSR. Submitted September 22, 1964.

BOLDYREVA, G.N.; GRINDEL', O.M.

Investigating the electrical activity of different divisions of the brain in frogs. Fiziol.zhur. 45 no.9:1037-1044 S '59. (MIRA 13:1)

1. Institut neyrokhirurgii im. N.N. Burdenko, Moskva.
(BRAIN physiol)

BOLDYREVA, G.N.

Conditioned reflex change-over of the rhythm in the human electroencephalogram in case of sound combined with rhythmic light. Trudy Inst. vys. nerv. deiat. Ser. fiziol. 6:222-231 '61. (MIRA 14:12)

1. Iz Laboratorii obshchey fiziologii tsentral'noy nervnoy sistemy Instituta vysshey nervnoy deyatel'nosti AN SSSR i Laboratorii elektrofiziologii Instituta neyrokhirurgii imeni N.N.Burdenko AMN SSSR, zav. - V.S.Rusinov.
(CONDITIONED RESPONSE) (ELECTROENCEPHALOGRAPHY)

S/247/62/012/006/002/006
D296/D307

AUTHORS: Boldyreva, G.N. and Rusinov, V.S.

TITLE: Dynamics of conditioned reflex changes caused by repeated combinations of a sound with a rhythmical visual stimulus, as shown on EEG patterns

PERIODICAL: Zhurnal vysshey nervnoy deyatel'nosti, v. 12, no. 6, 1962, 1011 - 1020

TEXT: Earlier investigations have shown that after repeated combination with visual stimuli, certain sounds can become conditioning stimuli and may evoke changes in the EEG pattern which will then correspond to the rhythm of the light stimulus. In the present paper the authors describe this conditioned response in greater detail: 56 experiments were carried out on 11 healthy persons, each of whom underwent 3 - 12 tests. The sound of 60 db intensity was produced by a ЗГ - 2 А (3G-2A) sound generator and preceded the light stimulus by 1.5 - 2 sec., while the conditioned reflex was

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being established. The auditory stimulus lasted for 8-10 seconds. The visual stimulus consisted of a rhythmically flickering light emitted by an ЭФС-01 (EFS-01) photo-electric stimulator, giving 5 - 25 flashes per second. Each flash lasted 5 - 7 msec., reaching a brightness of 1000 candlepower. The pattern was recorded on a 15 channel electroencephalograph supplied by Alvar. A bipolar pickup from one of the hemispheres was used. The subject sat in a screened chamber, and after the test was asked to give a verbal account of his or her subjective impressions. The original EEG response to the sound was first extinguished by repetition, and the signal was then combined with the light stimulus. After a few repetitions of the sound-light combinations, rhythmic EEG changes exactly coinciding with the rhythm of the visual stimulus were produced by the sound alone. The changes were however irregular and unstable, owing most probably to the rapid extinction of the reflex. The response was more marked initially than at later stages and could be recorded diffusely from various parts of the hemisphere. It was sometimes localized in certain areas, often differing from the area from which the original response to the light stimulus had been recorded.

Changes in the surroundings elicited an orientation reflex accompanied by an intensification of the response, which was explained by the authors as activation of unspecific brain centers. There are 5 figures.

ASSOCIATION: Institut vysshey nervnoy deyatel'nosti i neyrofiziologii Akademii nauk SSSR i Institut neyrokhirugii im. N.N. Burdenko AMN SSSR
(Institute of Higher Nervous Activity and Neurophysiology, Academy of Sciences USSR and Institute of Neurosurgery, im. N.N. Burdenko, AMS USSR)

SUBMITTED: June 30, 1962

Card 3/3

BOLDYREVA, G.N. (Moskva)

Assimilation of the rhythm of flashing light in the EEG of patients with focal brain lesions. Vop. neirokhir. 26 no.5: 50-53 S-O'62 (MIRA 17:4)

1. Institut neyrokhirurgii imeni akademika N.N. Burdenko AMN SSSR i Institut vysshey nervnoy deyatel'nosti AN SSSR.

GRINDEL', O.M.; BOLDYREVA, G.N.; BURASHNIKOV, Ye.N.; ANDREYEVSKIY, V.M.

Possibilities of using correlation analysis of the human electroencephalogram. Zhur. vys. nerv. deiat. 14 no.5:745-754 S-O '64. (MIRA 17:12)

1. Institut neyrokhirurgii im. N.N. Burdenko AMN SSSR i Institut vysshey nervnoy deyatel'nosti i neyrofiziologii AN SSSR.

BOLDYREVA, G.N.; BRAGINA, N.N.; PUCHINSKAYA, L.M.

Clinical electrophysiological correlation in focal lesion of the motor analyzer on the cortical and subcortical level. Zhur. nevr. i psikh. 65 no.1:61-66 '65. (MIRA 18:2)

1. Nauchno-issledovatel'skiy ordena Trudovogo Krasnogo Znameni institut neyrokhirurgii im. N.N. Burdenko AMN SSSR i Institut vysshey nervnoy deyatel'nosti i neyrofiziologii AN SSSR, Moskva.

L 27761-66 EWT(m)/EWP(e) WH

ACC NR: AP6015633 (A) SOURCE CODE: UR/0413/66/000/009/0039/0039

INVENTOR: Avetikov, V. G.; Boldyreva, G. V.; Zvyagil'skiy, A. A.; Nedel'ko, E. Ye.

ORG: none

TITLE: Ceramic material. Class 21, No. 181163

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9, 1966, 39

TOPIC TAGS: ceramic material, ceramic material composition

ABSTRACT: This Author Certificate introduces a ceramic Al_2O_3-base material containing B_2O_3 and CaO for use in electronic and radioelectronic instruments. To obtain material with low dielectric losses and increased heat-conductivity, the composition is set as follows: 98.0—98.5% Al_2O_3, 0.5—0.6% B_2O_3, 0.6—0.7% CaO, and 0.4—0.7% ZrO_2. [AZ]

SUB CODE: 11/ SUBM DATE: 22Mar65/ ATD PRESS: 5101

Card 1/1 UDC: 621.315.612:546.621

ACC NR: AP6029883 SOURCE CODE: UR/0413/66/000/015/0044/0044

INVENTOR: Avetikov, V. G.; Boldyreva, G. V.; Zvyagil'skiy, A. A.; Nedel'ko, E. Ye.

ORG: none

TITLE: Ceramic material. Class 21, No. 184303

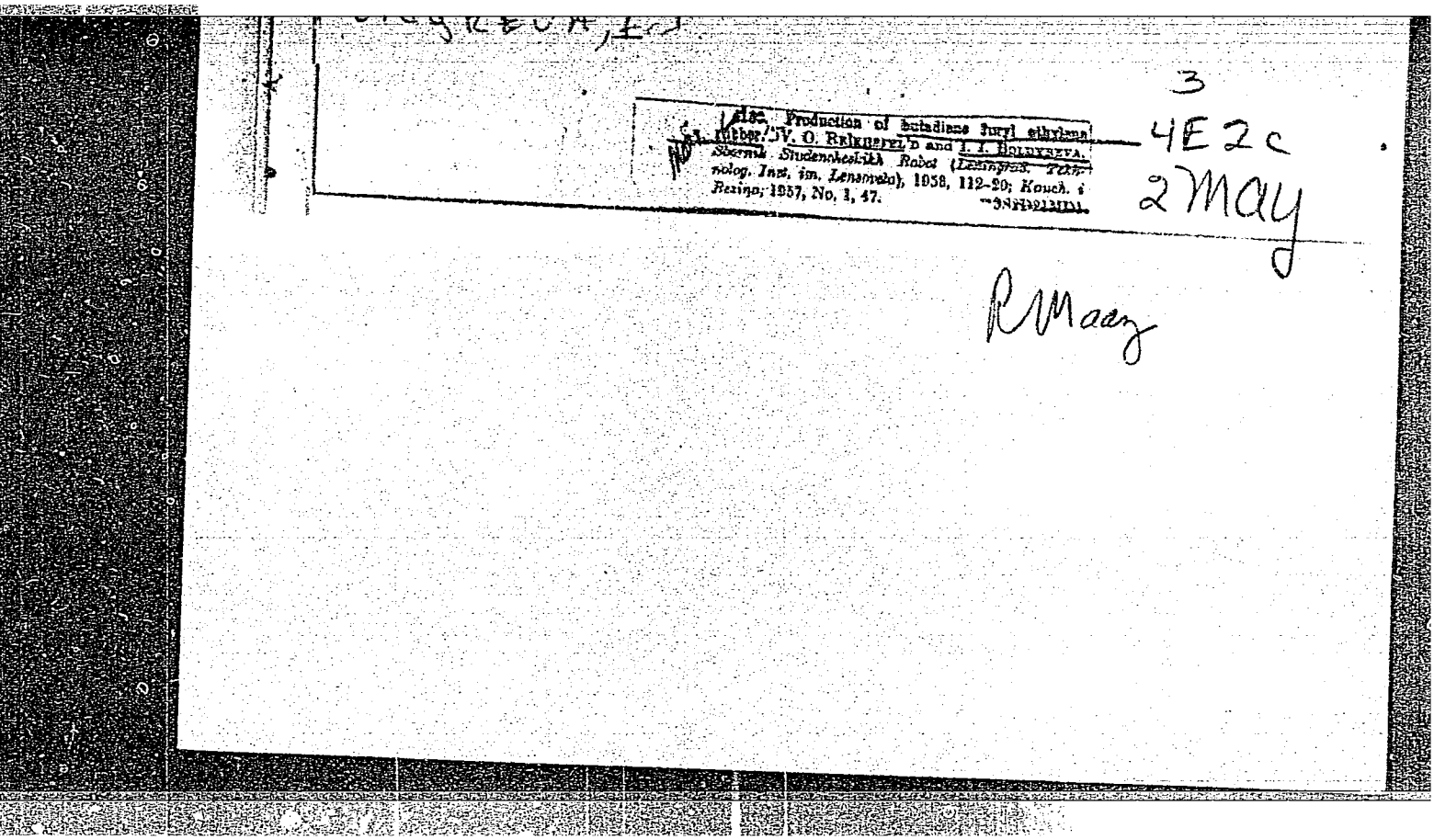
SOURCE: Izobret prom obraz tov zn, no. 15, 1966, 44

TOPIC TAGS: ceramic material, aluminum oxide base material, boron sesquioxide containing material, refractory ceramic material, low dielectric loss material

ABSTRACT: This Author Certificate introduces an Al_2O_3-base ceramic material used in electronic and radioelectronic devices. The material contains 97—98% Al_2O_3, 1.7—2.2% B_2O_3, and 0.6—0.8% MgO and has low dielectric losses and high mechanical strength at high temperatures. [MS]

SUB CODE: 09/ SUBM DATE: 22Mar65/ ATD PRESS: 5070

Card 1/1 blg UDC: 621.315.612: :546.621



3

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BOLDYREVA, I. I.

6601. Production and properties of synthetic cis-polyisoprene. I. I. Boldyreva, B. A. Dolgoplosk, L. S. Ivanova, V. A. Kaz and V. N. Reikh. *Khim. Nauka i Prom.*, 1957, 2, 391–2. The authors briefly report work carried out at the Vsesoyuzn. Nauchno-Issled. Inst. Sint. Kauch. on the use of triethyl aluminium and titanium tetrachloride as Ziegler type catalysts to give a polyisoprene rubber approximating in structure and properties generally to natural rubber and distinct from SKI. 3S2D

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BOLDYREVA, I.I.; DOLGOPLOSK, B.A.; KROL', V.A.

Reactions of organometallic compounds with salts of heavy metals. Part 3: Reactions of organoaluminum compounds with titanium halides. Vysokom. soed. 1 no.6:900-906 Je '59. (MIRA 12:10)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka.

(Aluminum organic compounds)
(Titanium halides)

5.3300 69507

AUTHORS: Boldyreva, I. I., Dolgoplosk, B. A., Corresponding Member, AS USSR, Kropacheva, Ye. N., Nel'son, K. V. S/020/60/131/04/031/073 B011/B017

TITLE: Cis-trans-isomerization of Natural Rubber Under the Influence of Hydrogen Chloride and Ethyl Aluminum Dichloride

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 4, pp 830-832 (USSR)

TEXT: The authors investigated the effect of anhydrous HCl and of ethyl aluminum chloride on a benzene solution of natural rubber under conditions which had been described earlier (Ref 1). HCl was introduced as a saturated benzene solution. The microstructure of each sample was characterized by means of the IR-absorption spectra. The quantitative content of cis- and trans-configurations was determined on the basis of the band 840 cm^{-1}. Since, due to the HCl addition, the non-saturation of the polymer is partly reduced, the relative content of the links of each configuration was calculated in % of the double bonds remaining in the polymer. Table 1, and figures 1 and 2 show the results. The authors emphasize that the data of the relative content of cis-trans-links only characterize the qualitative picture of the process since the accuracy of spectroscopic determinations sensibly decreases with decreasing non-saturation of the polymer. Since the solubility of the polymer is limited, it was not always possible to compensate for the decrease in the

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Cis-trans-isomerization of Natural Rubber Under the Influence of Hydrogen Chloride and Ethyl Aluminum Dichloride

S/020/60/131/04/031/073
B011/B017

number of double bonds by increasing the concentration of the polymer in solutions. Table 1 shows that ethyl aluminum chloride as well as HCl exercise an isomerizing effect on the polymer chain of natural rubber. The number of trans-links increases with the concentration of the isomerizing agent. In both cases, the isomerization is accompanied by a reduction of the non-saturation of the polymer chain. In the case of aluminum chloride, this seems to be mainly due to the intramolecular ring formation. HCl, however, reduces the non-saturation only insofar as it is added to the double bond (Fig 1). The amount of HCl added corresponds to the reduction of non-saturation of the chain. The non-saturation continuously decreases with extension of the reaction time (Curve 1). In this connection, the relative content of trans-links (Curves 2 and 3), and the chlorine content in the polymer, increase steadily (Curve 3). Figure 2 shows that the isomerization and the addition of HCl already start at -70°, and that they considerably are accelerated in the case of a temperature rise. At 60°, the total content of double bonds, and of added chlorine, is only 82% of the theoretical content. This is apparently due to the ring formation. The experiments of the authors show that under the described conditions cis-polybutadiene is not sensibly isomerized. The high sensitivity of cis-polyisoprene to isomerization under the influence of ion catalysts is probably connected with

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69507

Cis-trans-isomerization of Natural Rubber Under the Influence of Hydrogen Chloride and Ethyl Aluminum Dichloride

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the iso-structure of the chain. The easier stereospecific synthesis of cis-polyisoprene as compared to that of cis-polybutadiene is probably also due to this fact. There are 2 figures, 1 table, and 9 references, 2 of which are Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S. V. Lebedeva
(Scientific Research Institute of Synthetic Rubber imeni S. V. Lebedev)

SUBMITTED: October 26, 1959

Card 3/3

L 45390-65

ACCESSION NR: AP5010933 UR/0286/65/000/007/0116/0116

AUTHORS: Pak Vanbo; Krinskiy, Yu. P.; Boldyreva, I. S. 18 B

TITLE: Device for automatic measurement of the average temperature of a medium. Class 42, No. 169829

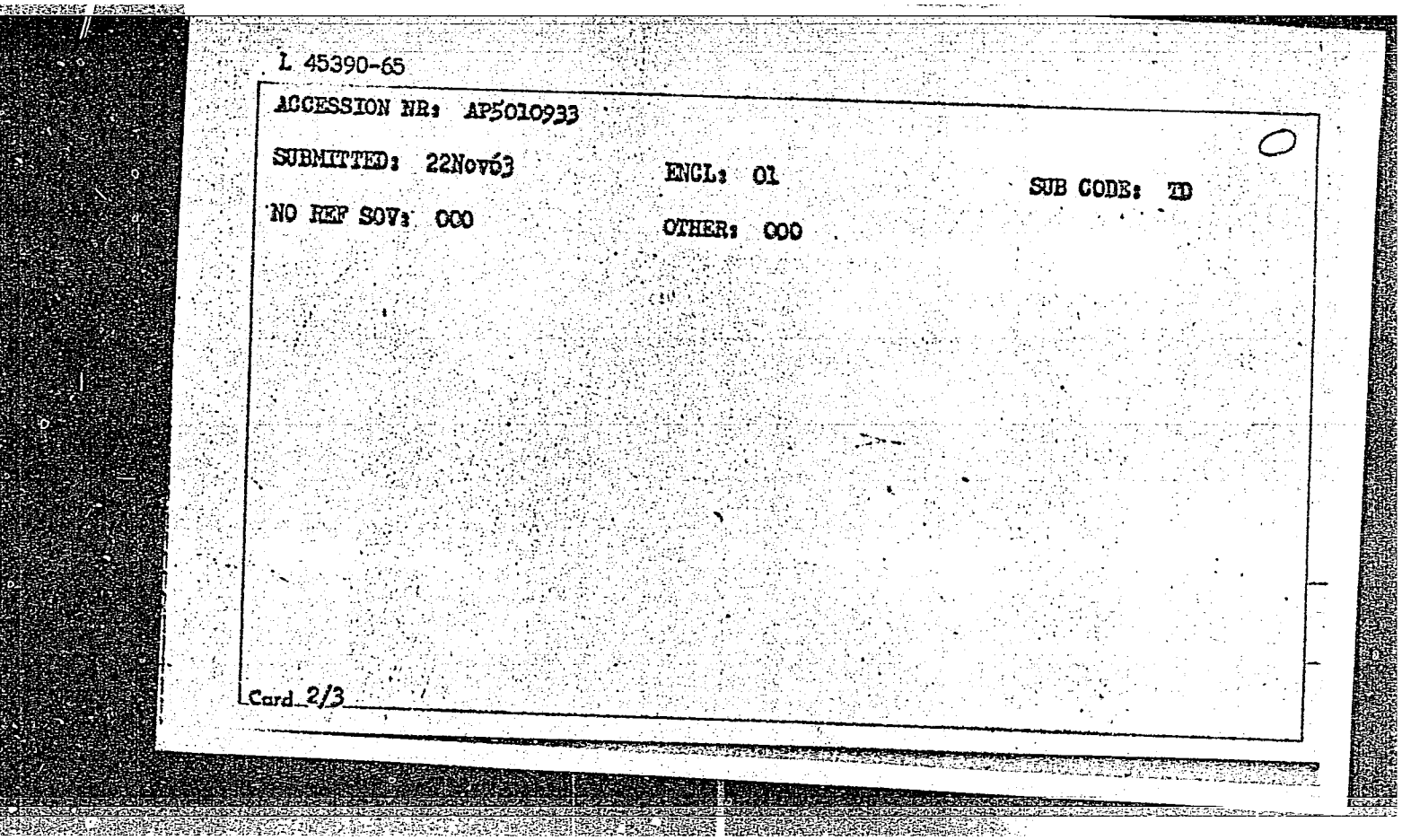
SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 7, 1965, 116

TOPIC TAGS: temperature measurement, thermocouple

ABSTRACT: This Author Certificate presents a device for automatic measurement of the average temperature of a medium according to Author Certificate No. 154688. To increase the accuracy of measurements under conditions of electrical noise whose source is the investigated object, a unit containing three capacitors is connected in the circuit between the thermocouples and the measuring device (see Fig. 1 on the Enclosure). Two of the capacitors are connected to groups of thermocouples alternately in the same polarity and with 180° phase shift. They are also connected to the third capacitor which is connected in parallel with the measuring device. Orig. art. has: 1 diagram.

ASSOCIATION: none

Card 1/3



L 45390-65

ACCESSION NR: AP5010933

SUBMITTED: 22Nov63 ENCL: 01 SUB CODE: TD

NO REF SOV: 000 OTHER: 000

Card 2/3

L 45390-65

ACCESSION NR: AP5010933

ENCLOSURE: 01

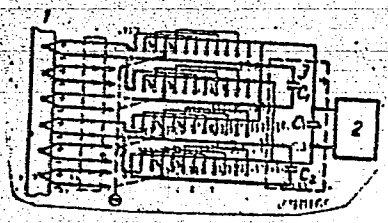


Fig. 1. Device for automatic measurements of the average temperature of a medium

1- thermocouples; 2- measuring device; 3- capacitor unit

Card 3/3

BOLDYREVA, K.I., meditsinskaya sestra

Care for surgical patients following operations on the chest for chronic tuberculous empyemas. Med. sestra 20 no.1:27-30 Ja '61. (MIRA 14:3)

1. Iz gnoynogo legochno-khirurgicheskogo otdeleniya Gosudarstvennogo nauchno-issledovatel'skogo instituta tuberkuleza, Moskva.
(TUBERCULOSIS) (SURGICAL NURSING)

CA

16

Effect of penicillin on beer bacteria, D. L. Shatnis and [illegible]. *Invest. Akad. Nauk Kazakh. S.S.R., Ser. Mikrobiol.* No. 1 (whole No. 62), 53-6(1940).—Spoilage of beer by bacteria (*Micrococcus* or *Pediococcus*) can be controlled to some extent by addns. of penicillin, provided that pure penicillin is used. Crude solns. of the drug are of little effect as they appear to be inactivated in the brew.

G. M. Kosolapoff

BOLOTINA, K. V. and SHAMIS, D. L.

"The Effect of Pencillin on Beer Sarcina", iz Ak Nauk Kazakh SSR, Ser Mikrobiol, No. 1, pp 52-56, 1951.

BOLDYREVA, Klavdiya Vasil'yevna, svinarka. Prinimal uchastiye LUK'YANOV, N.V., zootekhnik. TRET'YAKOV, G.P., red.; SEMENCHUK, S.I., red.; YASHEN'KINA, Ye.A., tekhn.red.

[Lowering the cost of pork production] Snizhaem zatraty na proizvodstvo svininy. Kuibyshev, Kuibyshevskoe knizhnoe izd-vo, 1960. 11 p. (MIRA 14:1)

1. Sovkhoz "Pioner" (for Boldyreva).
(Swine)

CA

12

Nonfat dry substances in molten butter. D. Bubnov and L. Boldyreva. *Molochnaya Prom.* 10, No. 10, 23-8 (1949).—The nonfat dry solids in butter is (av.) 0.2% in standard molten butter, 1.6 in cream butter at collection points, and 1.2 in standard cream butter.

G. M. Kosolapoff

1. POLDYREVA, L., Eng.

2. USSR (600)

4. Dairying

7. Efficient organization of production, Mol. prom., 13, No. 11, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February, 1953. Unclassified.

SOV/81-59-5-16831

Translation from: Referativnyy zhurnal, Khimiya, 1959, Nr 5, p 455 (USSR)

AUTHORS: Anisonyan, A.A., Volod'ko, N.P., Boldyreva, L.A.

TITLE: The Production of a Gas Mixture Rich in Carbon Monoxide From the Residual Gas of Synthesis

PERIODICAL: V sb.: Khim. pererabotka topliva. Moscow, AS USSR, 1957, pp 341 - 347

ABSTRACT: Investigations have shown that the process for obtaining a gas mixture rich in CO by the method of partial combustion of residual gases from synthesis, runs best at a pressure of 15 atm at 900 - 950°C on Ni-catalysts; under these conditions 1 - 1.5% methane remains in the reaction gases, and the content of CO can vary, depending on the composition of the residual gas and its ratio to O_2.

G. Bonchev

Card 1/1

USSR/Chemical Technology - Chemical Products and Their Application. Treatment of Natural Gases and Petroleum. Motor and Jet Fuels. Lubricants. I-8

Abs Jour : Ref Zhur - Khimiya, No 1, 1958, 2579

Author : Anisonyan, A.A., Volod'ko, N.P., Boldyreva, L.A.

Inst : All-Union Scientific Research Institute of Natural Gases

Title : Investigation of the Process of Incomplete Combustion of Methane in Oxygen Under Pressure for the Purpose of Producing Synthesis Gas.

Orig Pub : Tr. Vses. n.-i. in-t prirodn. gazov, 1957, No 1(9), 139-149

Abstract : Description of the results of a laboratory study of the reaction of incomplete combustion of natural gas (NG), at a pressure of 15 atmospheres gauge pressure, for the purpose of obtaining a mixture of CO and H_2 for the synthesis

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USSR/Chemical Technology - Chemical Products and Their Application. Treatment of Natural Gases and Petroleum. I-8

Abs Jour : Ref Zhur - Khimiya, No 1, 1958, 2579

of liquid fuel. The experiments were carried out in a tube of heat-resistant steel, 40 mm in diameter, 300 mm long, with a Ni + Al_2O_3 catalyst (C), and without catalyst, using Saratov NG having the following composition (in %): CH_4 90.0, C_2H_5 3.25, C_3H_8 1.5, C_4H_{10} 0.75, C_5 and higher 0.95, CO_2 0.5, N_2 3.05. Gaseour oxygen was used, containing 98-99% O_2. It is shown that in the absence of a catalyst, but at a pressure of 15 atmospheres gauge pressure, a synthesis gas of satisfactory composition is obtained at 1250-1300°. Over a catalyst the optimal temperature of the process is 1100-1150°. On incomplete combustion of NG at 1300°, without C, the composition of the resulting synthesis gas and the degree of useful consumption of initial carbon and O_2 are practically the same at normal pressure and at a pressure of 15 atmospheres gauge pressure. On

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USSR/Chemical Technology - Chemical Products and Their I-8